In the claims:

For the Examiner's convenience, all pending claims are presented below with changes shown in accordance with the mandatory amendment format.

1. (Currently Amended) A method to train image classification, comprising:

measuring noise and edge sharpness in a first image;

generating a feature vector from the first image by:

generating a noise-reduced second image from the first image;

calculating a difference between the first image and the second image;

generating a noise pixel histogram of the difference to use as a noise feature vector;

generating a blurred third image from the first image;

calculating another difference between the first image and the third image;

generating a sharpness pixel histogram of the another difference to use as a sharpness feature vector; and

combining the noise feature vector and the sharpness feature vector as the feature vector; and

training a classification model from the ~~noise~~ feature vector to classify a ~~third~~ fourth image as a natural image versus an artificial image from the noise and the edge sharpness in the ~~third~~ fourth image.

2. (Canceled)

3. (Previously Presented) The method of claim 1, wherein generating the noise-reduced second image further comprises applying a median filter to the first image.

4. (Previously Presented) The method of claim 1, wherein generating the noise-reduced second image further comprises applying a Gaussian filter to the first image.

5. (Previously Presented) The method of claim 1, wherein generating the noise-reduced second image further comprises applying a Wiener filter to the first image.

6. (Original) The method of claim 1, wherein the first image further comprises a frame in a video stream.

7. (Previously Presented) A method to train image classification, comprising:

generating a feature vector from an image; and

training a classification model from the feature vector to classify a second image as a slide image versus a comic image, wherein the feature vector further comprises at least one feature of an image selected from the group consisting of at least one text block feature of the image, at least one edge-location feature of the image, and at least one aspect ratio of the image.

8. (Previously Presented) The method of claim 7, wherein generating a feature vector from an image further comprises generating an aggregated feature vector from an image.

9. (Canceled)

10. (Original) The method of claim 7, wherein the image further comprises a frame in a video stream.

11. (Previously Presented) A method to classify an image as a slide image versus a comic image, comprising:

receiving a feature vector of the image, wherein the feature vector is generated from at least one feature of an image selected from the group consisting of at least one text block feature of the image, at least one edge-location feature of the image, and at least one aspect ratio of the image;

classifying the image as slide image versus comic image, from the feature vector; and

generating the classification of the image.

12. (Original) The method of claim 11, wherein the classification is performed on a set of video frames of a video sequence, and the most likely classification result emerging out of the classification results of the individual frames is taken as the class of the video sequence.

13. (Canceled)

14. (Previously Presented) A method to classify a first image as natural image versus artificial image, further comprising:

receiving a feature vector of the first image, wherein the feature vector comprises one or more of a noise vector and a sharpness vector;

classifying the first image as natural image versus artificial image from the feature vector; and

generating the classification of the image;

wherein the classifying is based on training from one or more of a noise feature vector and a sharpness feature vector, the noise feature vector comprising a pixel histogram of a difference between a second image and a noise-reduced third image generated from the second

image, and the sharpness feature vector comprising a pixel histogram of a difference between the second image and a blurred fourth image generated from the second image.

15. (Original) The method of claim 14, wherein the classification is performed on a set of video frames of a video sequence, and the most likely classification result emerging out of the classification results of the individual frames is taken as the class of the video sequence.

16.-17. (Canceled)

18. (Currently Amended) An image classification system comprising:

a feature extraction component to extract a feature that distinguishes a frame in a video stream between a naturally-looking image versus an artificially-looking image; and

a training system operably coupled to the feature extraction component to train a classification model to distinguish the feature based on one or more of a noise feature vector and a sharpness feature vector, the noise feature vector comprising a pixel histogram of a difference between a first image and a noise-reduced second image generated from the second image, and the sharpness feature vector comprising a pixel histogram of a difference between the first image and a blurred third image generated from the first image.

19. (Canceled)

20. (Original) The system of claim 18, wherein the classification is performed on a set of video frames of a video sequence, and the most likely classification result emerging out of the classification results of the individual frames is taken as the class of the video sequence.

21. (Previously Presented) A system to classify an image comprising:

a processor;

a storage device coupled to the processor;

a training system coupled to the processor to train classification of at least one image as either a natural image or an artificial image based on a noise feature vector including a pixel histogram of a difference between a first image and a noise-reduced second image generated from the first image; and

a classification component coupled to the processor to classify the at least one image as either a natural image or an artificial image based on the trained classification.

22. (Original) The system of claim 21, wherein the at least one image further comprises at least one frame in a video stream.

23. (Canceled)

24. (Currently Amended) A system to train classification of ~~classify~~ an image, comprising:

a processor;

a storage device coupled to the processor;

a training system coupled to the processor to train classification of at least one image as either a slide image or an comic image, wherein the training system further comprises a generator of a feature vector from at least one feature of an image selected from the group consisting of at least one text block feature of the image, and at least one edge-location feature of the image, and at least one aspect ratio of the image.

25. (Original) The system of claim 24, wherein the at least one image further comprises at least one frame in a video stream.

26-29. (Canceled)

30. (Previously Presented) A system to classify an image, comprising:

a processor;

a storage device coupled to the processor; and

a classification component coupled to the processor to classify an image as either a slide image or an comic image;

wherein the classification component further comprises a generator of a feature vector from at least one feature of an image selected from the group consisting of at least one text block feature of the image, at least one edge-location feature of the image, and at least one aspect ratio of the image.

31. (Original) The system of claim 30, wherein the image further comprises a frame in a video stream.

32. (Canceled)

33. (Previously Presented) A computer-readable medium having computer-executable instructions to cause a computer to perform a method comprising:

generating a feature vector from a first image, wherein the feature vector is one or more of a noise feature vector and an edge-sharpness feature vector, the noise feature vector a pixel histogram of a difference between the first image and a noise-reduced second image generated from the first image, and the sharpness feature vector comprising a pixel histogram of a difference between the first image and a blurred third image generated from the first image; and

training a classification model to classify a fourth image as a natural image versus an artificial image;

wherein the training is based on the feature vector.

34. (Original) The computer-readable medium of claim 33, wherein the first image further comprises a frame in a video stream.

35-36. (Canceled)

37. (Previously Presented) A computer-readable medium having computer-executable instructions to cause a computer to perform a method comprising:

generating a feature vector from a first image; and

training a classification model from the feature vector to classify a second image as a slide image versus a comic image, wherein the feature vector is generated from at least one feature of an image selected from the group consisting of at least one text block feature of the image, at least one edge-location feature of the image, and at least one aspect ratio of the image.

38. (Original) The computer-readable medium of claim 37, wherein the first image further comprises a frame in a video stream.

39. (Canceled)

40. (Previously Presented) A computer-readable medium having computer-executable instructions to cause a computer to perform a method comprising:

receiving a feature vector of the image, wherein the feature vector is generated from at least one feature of an image selected from the group consisting of at least one text block feature of the image, at least one edge-location feature of the image, and at least one aspect ratio of the image;

classifying the image from the feature vector as slide image versus comic image; and

generating the classification of the image.

41. (Original) The computer-readable medium of claim 40, wherein the classification is performed on a set of video frames of a video sequence, and the most likely classification result emerging out of the classification results of the individual frames is taken as the class of the video sequence.

42. (Canceled)

43. (Previously Presented) A computer-readable medium having computer-executable instructions to cause a computer to perform a method comprising:

receiving a feature vector of a first image, wherein the feature vector is one or more of a noise vector and an edge-sharpness vector;

classifying the first image as natural image versus an artificial image from the feature vector; and

generating the classification of the image;

wherein the classifying is based on training from one or more of a noise feature vector and a sharpness feature vector, the noise feature vector comprising a pixel histogram of a difference between a second image and a noise-reduced third image generated from the second image, and the sharpness feature vector a pixel histogram of a difference between the second image and a blurred fourth image generated from the second image.

44. (Previously Presented) The computer-readable medium of claim 43, wherein the classification is performed on a set of video frames of a video sequence, and the most likely classification result emerging out of the classification results of the individual frames is taken as the class of the video sequence.

45. (Currently Amended) An apparatus to train classification of ~~classify~~ at least one image, comprising:

a processor;

a storage device coupled to the processor; and

a training system coupled to the processor to train classification of at least one image as either a natural image or an artificial image, wherein the training system further comprises a generator of a noise feature vector and an edge sharpness vector of ~~each of~~ the at least one image;

wherein the classification is based on training from one or more of [[a]] the noise feature vector ~~comprises~~ that is a pixel histogram of a difference between a first image and a noise-reduced second image generated from the first image and a sharpness feature vector that is a pixel histogram of a difference between the first image and a blurred third image generated from the first image.

46. (Previously Presented) The apparatus of claim 45, wherein the at least one image further comprises at least one frame in a video stream.

47. (Canceled)

48. (Currently Amended) An apparatus to train classification of ~~classify~~ at least one image, comprising:

a processor;

a storage device coupled to the processor;

a classification component coupled to the processor to train classification of at least one image as either a slide image or an comic image, wherein the classification component further

comprising a generator of a feature vector from at least one feature of an image selected from the group consisting of at least one text block feature of the image, at least one edge-location feature of the image, and at least one aspect ratio of the image.

49. (Previously Presented) The apparatus of claim 48, wherein the at least one image further comprises at least one frame in a video stream.

50. (Canceled)

51. (Previously Presented) An apparatus to classify an image, comprising:

a processor;

a storage device coupled to the processor; and

a classification component coupled to the processor to classify a first image as either a natural image or an artificial image, wherein the classification component further comprises a feature vector generator to generate one or more of a noise vector and a edge-sharpness vector of the first image;

wherein the classifying is based on training from one or more of a noise feature vector and a sharpness feature vector, the noise feature vector comprising a pixel histogram of a difference between a second image and a noise-reduced third image generated from the second image, and the sharpness feature vector comprising a pixel histogram of a difference between the second image and a blurred fourth image generated from the second image.

52. (Original) The apparatus of claim 51, wherein the classifying is performed on a set of video frames of a video sequence, and the most likely classification result emerging out the classification results of the individual frames is taken as the class of the video sequence.

53.-54. (Canceled)

55. (Previously Presented) An apparatus to classify an image, comprising:

a processor;

a storage device coupled to the processor; and

a classification component coupled to the processor to classify an image as either a slide image or an comic image, wherein the classification component further comprising a generator of a feature vector from at least one feature of an image selected from the group consisting of at least one text block feature of the image, at least one edge-location feature of the image, and at least one aspect ratio of the image.

56. (Original) The apparatus of claim 55, wherein the classifying is performed on a set of video frames of a video sequence, and the most likely classification result emerging out the classification results of the individual frames is taken as the class of the video sequence.

57.-59. (Canceled)

60. (Currently Amended) The method of claim 1 [[59]], wherein generating a blurred ~~second~~ third image from [[a]] the first image further comprises applying a Gaussian filter to the first image.

61. (Canceled)

62. (Currently Amended) The method of claim 1 [[58]], wherein the first image further comprises all frames in a video stream.